

REMARKS/ARGUMENTS

This amendment responds to the office action dated November 12, 2004.

The Examiner has allowed claim 22. The Examiner indicated that claims 8 and 13 would be allowable if rewritten in independent form and amended to overcome a rejection under 35 U.S.C. § 112. Each claim has been rewritten in independent form as new claims 23 and 24, respectively. The applicant notes that the rejections under 35 U.S.C. § 112 are overcome in the rewritten claims by eliminating the respective terms that the Examiner believed to be indefinite. The Examiner indicated that independent claim 15 would be allowable if the rejection under 35 U.S.C. § 112 were overcome. As explained below, this has been done. Finally, the Examiner noted that claim 20 would be allowable if rewritten in independent form. Claim 20 has been rewritten as new claim 25 and claim 20 has been canceled. Therefore, each of claims 15 and 22-25 should be allowable.

The Examiner rejected claim 8 under 35 U.S.C. § 112, second paragraph because the claim recited the term “another direction” without previously reciting a first direction. Claim 8 has been amended to remove the limitation of “in another direction” and thereby overcoming the Examiner’s rejection.

The Examiner rejected claims 13 and 15 under 35 U.S.C. § 112, second paragraph because the respective limitations of “and being in a direction approximately perpendicular to said” maximum curvature (claim 13) / minimum curvature (claim 15) were indefinite when the respective minimum and maximum curvatures were not defined to include directions. Each of these respective limitations has been removed, thereby overcoming the Examiner’s rejection.

The Examiner objected to claims 1, 7-9, and 13 due to several informalities and required specified corrections. These corrections have been made.

The Examiner rejected claims 1, 7, 9, 10, 14, and 16-19 under 35 U.S.C. § 102(b) as being anticipated by Jefferson, U.S. Patent No. 5,745,596. That reference merely discloses a copy machine that is capable of adjusting image characteristics of scanned lines of documents. The copy machine of Jefferson performs all of its adjustments on a line-by-line basis, i.e. the copy machine does not consider information from any other scan line than the line being adjusted. *See e.g.* Jefferson at col. 3 lines 28-32 and col. 4 lines 2-27. For that reason, Jefferson does not disclose all of the respective claim limitations included in independent claims 1, 10, 14, and 16, as more specifically described below.

Independent claim 1, as amended, includes the limitation of “identifying the direction of a maximum intensity gradient for said edge.” This limitation is not disclosed by Jefferson for two reasons. As stated previously, the copy machine of Jefferson simply analyzes the intensity gradient of a scan line of an image in order to detect the boundaries of text along that scan line. Thus the copy machine, at best, is merely capable of identifying the polarity of the intensity gradient along the predetermined direction of the scan line. That is to say, the copy machine of Jefferson does not “identify” the direction of the intensity gradient, because the direction of the gradient never varies from being horizontal with respect to the imaging surface of the copy machine. Instead, Jefferson merely identifies whether the gradient along that line is increasing or decreasing, and by how much. An increasing gradient of a sufficient magnitude along a scan line is detected as a leading edge of text, and a decreasing gradient of a sufficient magnitude along a scan line is detected as a trailing edge of text.

Second, the copy machine of Jefferson is incapable of identifying the direction of a *maximum* intensity gradient *for said edge*. This must be true because the copy machine of Jefferson does not analyze any portions of the image above or below the scan line being examined. While the copy machine of Jefferson can detect the intensity gradient for the edge in the direction of the scan line, it cannot determine whether that gradient is the maximum gradient at that point on the edge, as would likely not be the case if the scan line intersects a text edge at any angle other than perpendicular.

For each of these reasons, amended independent claim 1, as well as dependent claims 7-9 which each depend from independent claim 1, patentably distinguish over Jefferson. The Examiner's rejection of these claims should therefore be withdrawn.

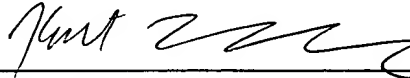
Independent claims 10 and 14 each include the limitation of identifying "an intensity gradient direction for . . . said edge components." Independent claim 16 includes the limitation of "a gradient direction detector for detecting an intensity gradient direction for at least some of said image edge components." As argued above with respect to independent claim 1, none of these limitations are disclosed by Jefferson, because the copy machine disclosed therein does not "identify" an intensity gradient direction, but merely determines the magnitude of an intensity gradient along a scan line. Therefore independent claims 10, 14, and 16, along with dependent claims 17-19, are each patentably distinguished over Jefferson, and the Examiner's rejection of these claims should be withdrawn.

Appl. No. 09/718,528
Amdt. dated April 1, 2005
Reply to Office Action of November 12, 2004

In view of the foregoing amendment and remarks, the applicant respectfully requests reconsideration and allowance of claims 1, 7-10, 13-19, and 22-25.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Kurt", followed by a series of stylized, wavy horizontal strokes.

Kurt Rohlf

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